

ABSTRACT

Disclosed is a brake system of the 'brake-by-wire' type for actuating a motor vehicle brake system having a brake booster which is operable in response to the driver's input by a brake pedal and to an electronic regulating and control unit. A device is provided to decouple a force-transmitting connection between the brake pedal and the brake booster in the 'brake-by-wire' operating mode. The electronic regulating and control unit (7) includes a control circuit for controlling the travel (S_{Ds}) covered by the output member (20) of the brake booster (3), the nominal value ($S_{Dsnominal}$) of the travel (S_{Ds}) covered by the output member (20) of the brake booster (3) is calculated corresponding to the actuating travel (S_{Bp}) of the brake pedal (1), and a monitoring module (24) is provided which, in the case of a fault such as the inclusion of air or brake circuit failure, performs a partial compensation of the extension of the travel (S_{Ds}) covered by the output member (20) of the brake booster (3), which extension is caused by the fault.